FIG. 1

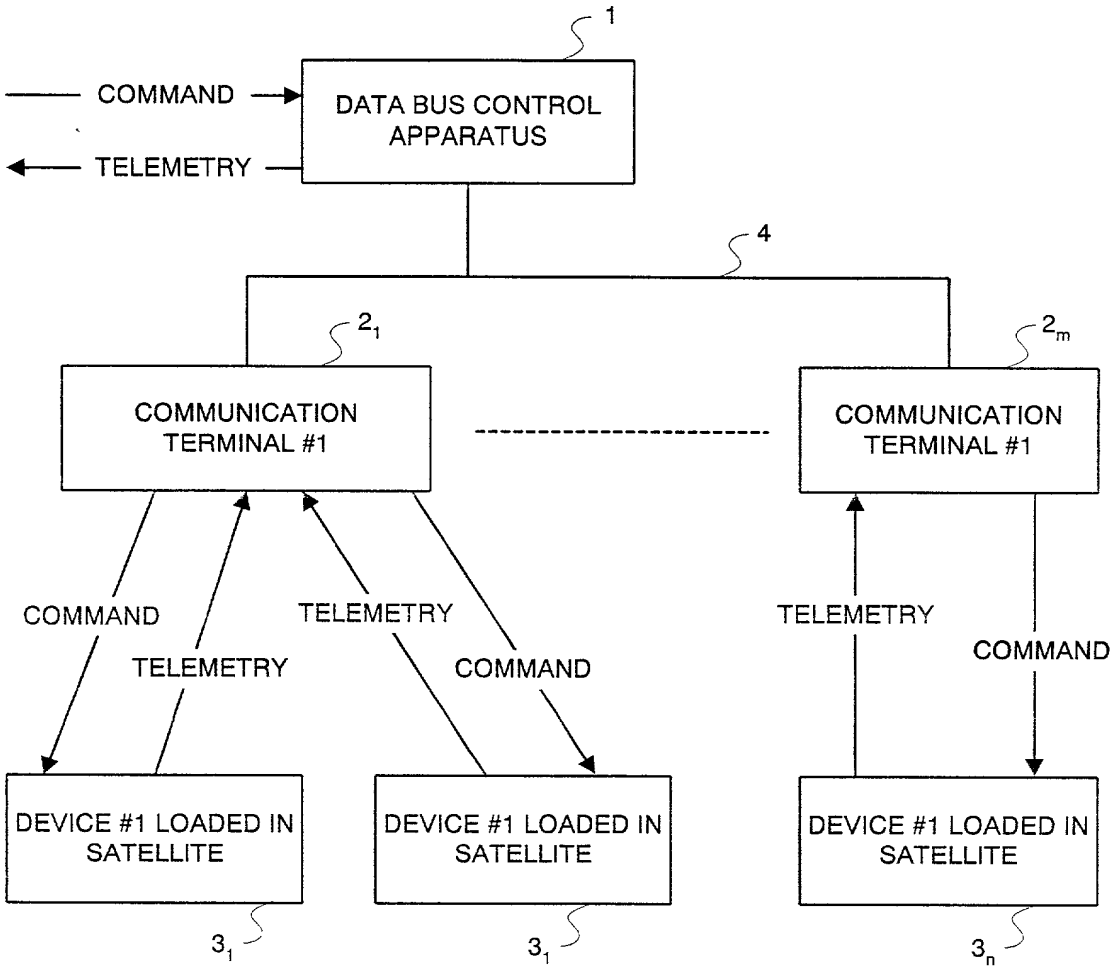
1
COMMAND
TELEMETRY
DATA BUS CONTROL APPARATUS
4
2_1
2_m
COMMUNICATION TERMINAL #1
COMMUNICATION TERMINAL #1
COMMAND
TELEMETRY
TELEMETRY
COMMAND
TELEMETRY
COMMAND
DEVICE #1 LOADED IN SATELLITE
DEVICE #1 LOADED IN SATELLITE
DEVICE #1 LOADED IN SATELLITE
3_1
3_1
3_n

FIG. 2

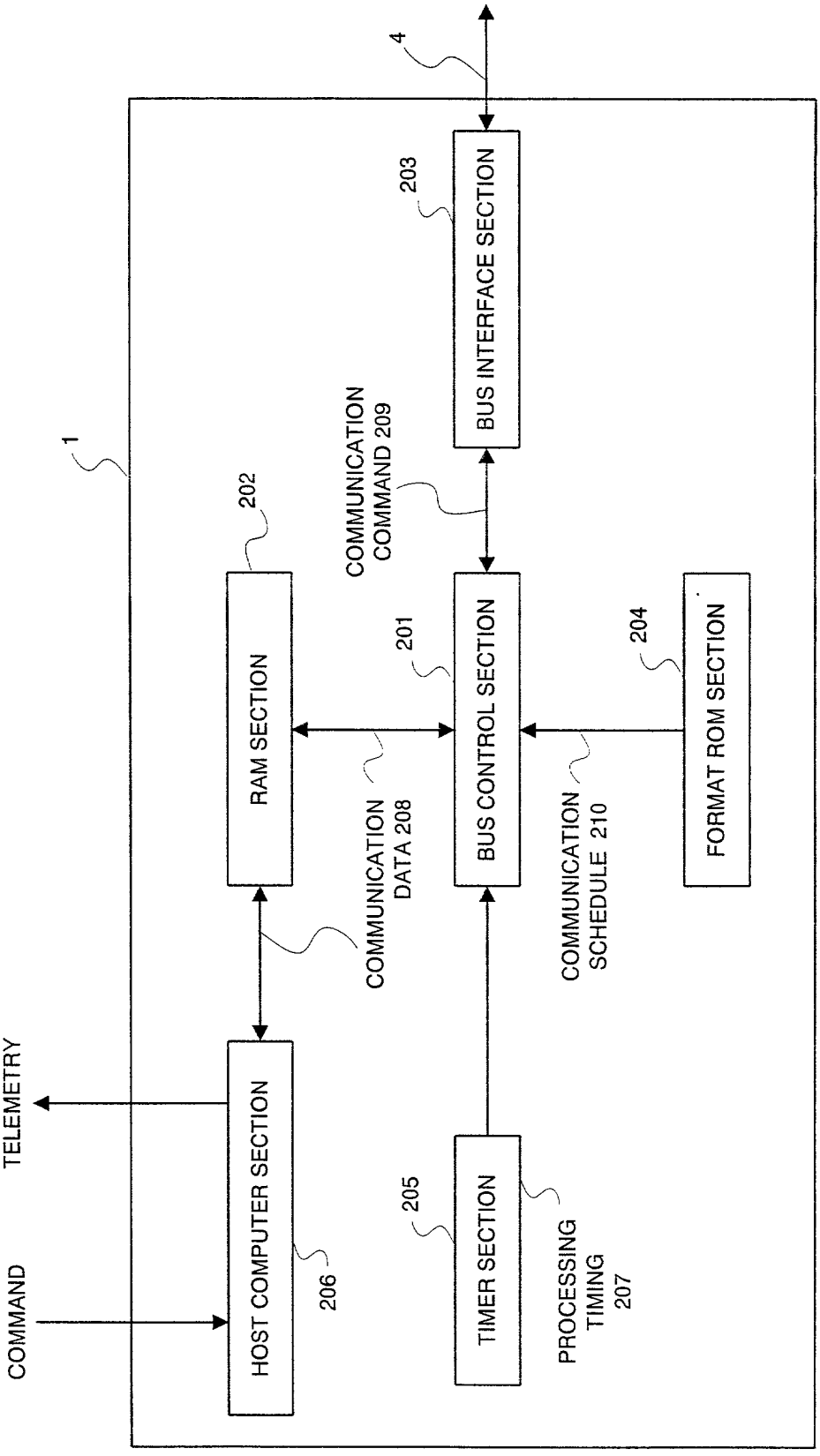
1
4
BUS INTERFACE SECTION
203
COMMUNICATION COMMAND 209
202
RAM SECTION
201
BUS CONTROL SECTION
204
FORMAT ROM SECTION
COMMUNICATION DATA 208
COMMUNICATION SCHEDULE 210
TELEMETRY
COMMAND
HOST COMPUTER SECTION
206
205
TIMER SECTION
PROCESSING TIMING 207

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FIG. 3

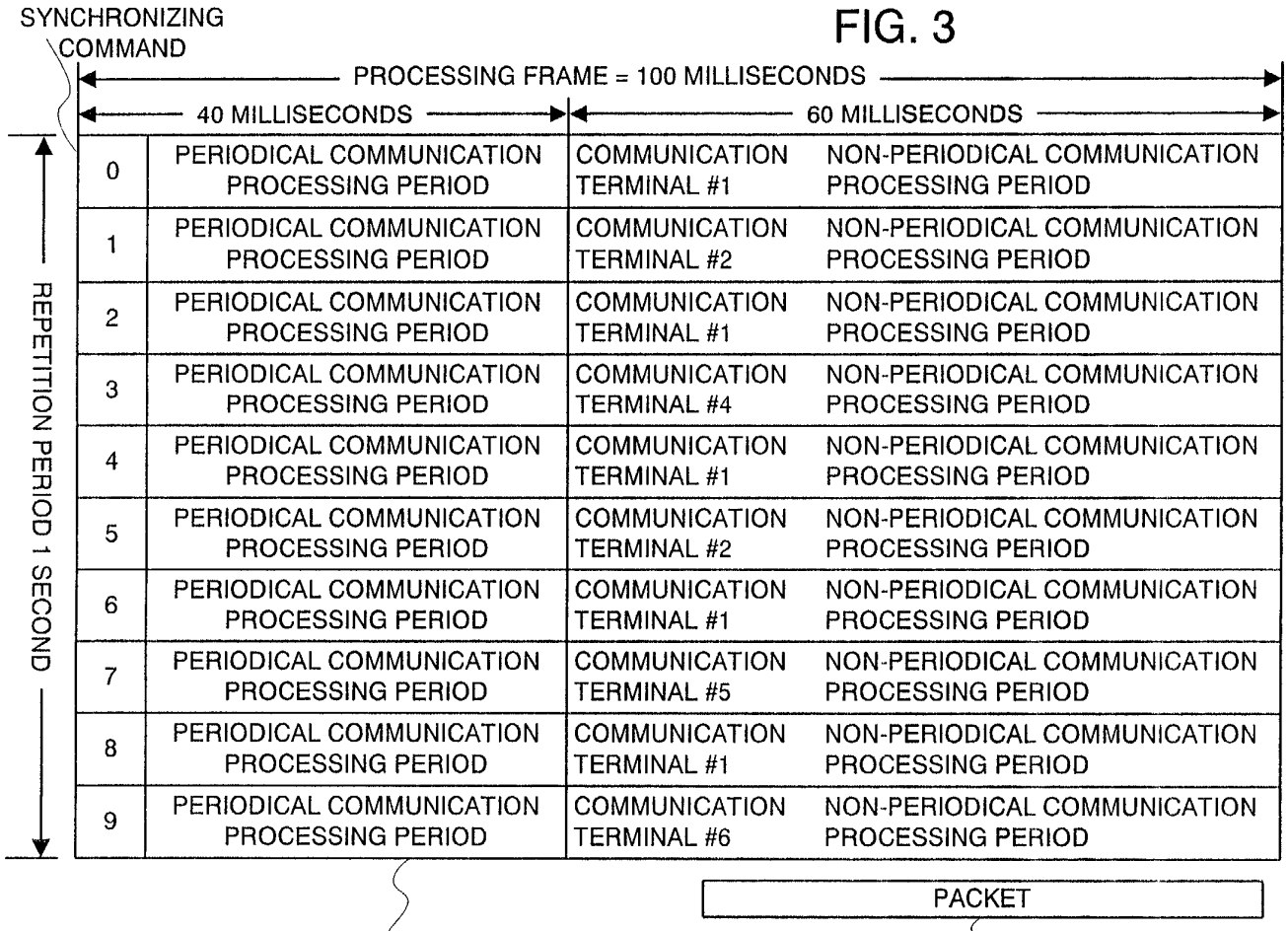

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FIG. 4

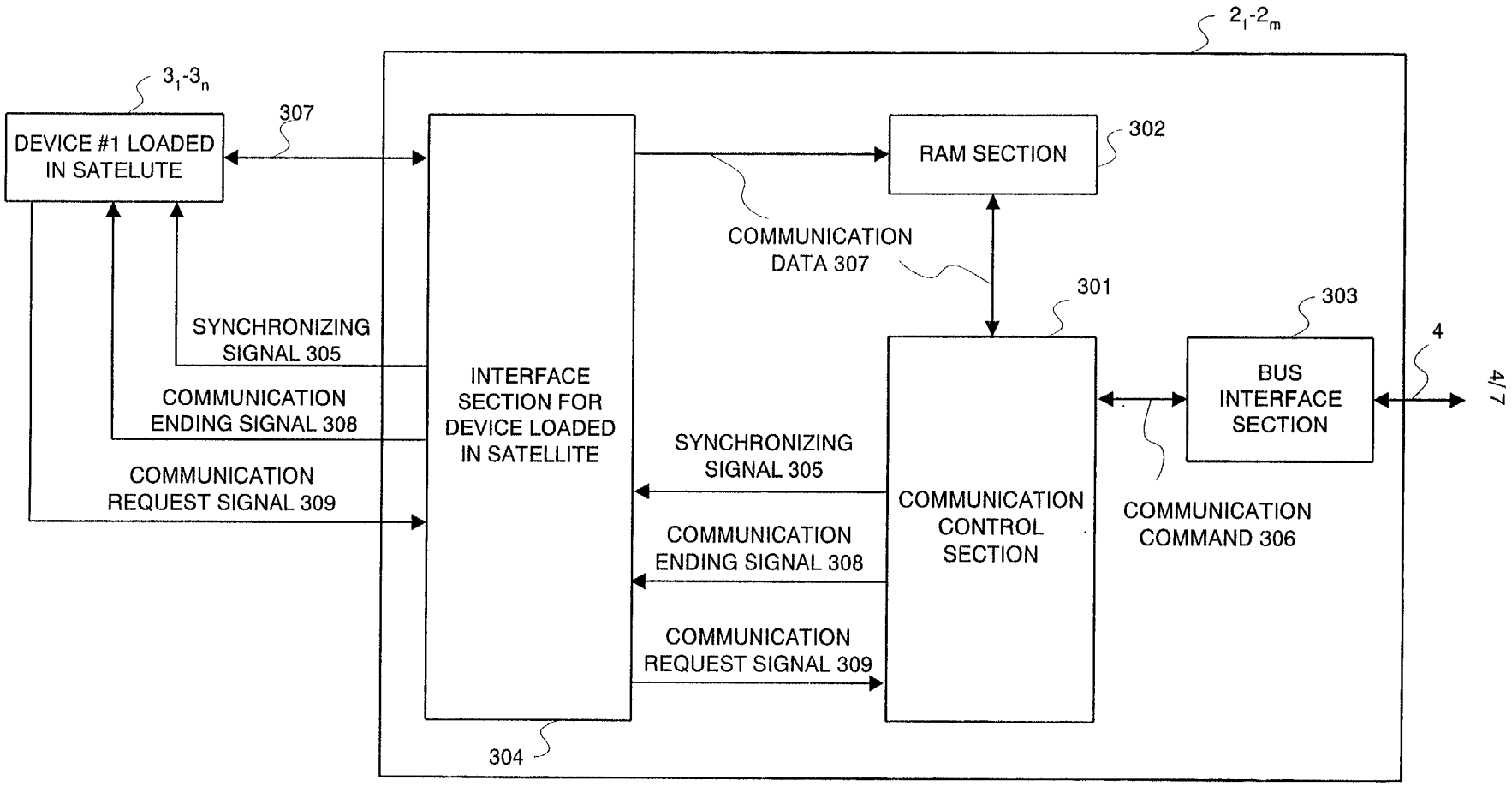


FIG. 5

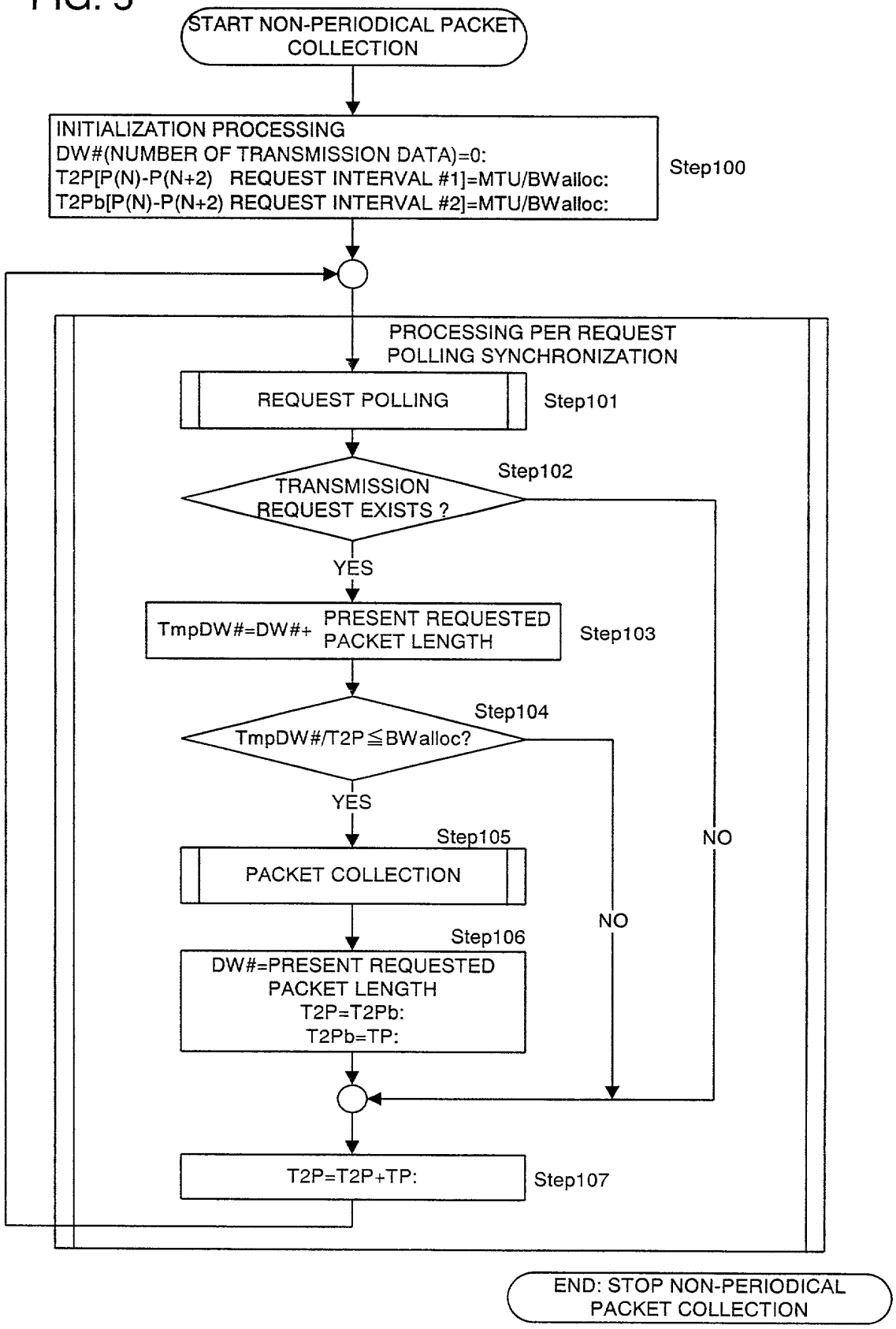

START NON-PERIODICAL PACKET COLLECTION
INITIALIZATION PROCESSING
DW#(NUMBER OF TRANSMISSION DATA)=0:
T2P[P(N)-P(N+2) REQUEST INTERVAL #1]=MTU/BWalloc:
T2Pb[P(N)-P(N+2) REQUEST INTERVAL #2]=MTU/BWalloc:
Step100
PROCESSING PER REQUEST POLLING SYNCHRONIZATION
REQUEST POLLING
Step101
TRANSMISSION REQUEST EXISTS ?
Step102
YES
NO
TmpDW#=DW#+ PRESENT REQUESTED PACKET LENGTH
Step103
TmpDW#/T2P≦BWalloc?
Step104
YES
NO
PACKET COLLECTION
Step105
DW#=PRESENT REQUESTED PACKET LENGTH
T2P=T2Pb:
T2Pb=TP:
Step106
T2P=T2P+TP:
Step107
END: STOP NON-PERIODICAL PACKET COLLECTION

FIG. 6

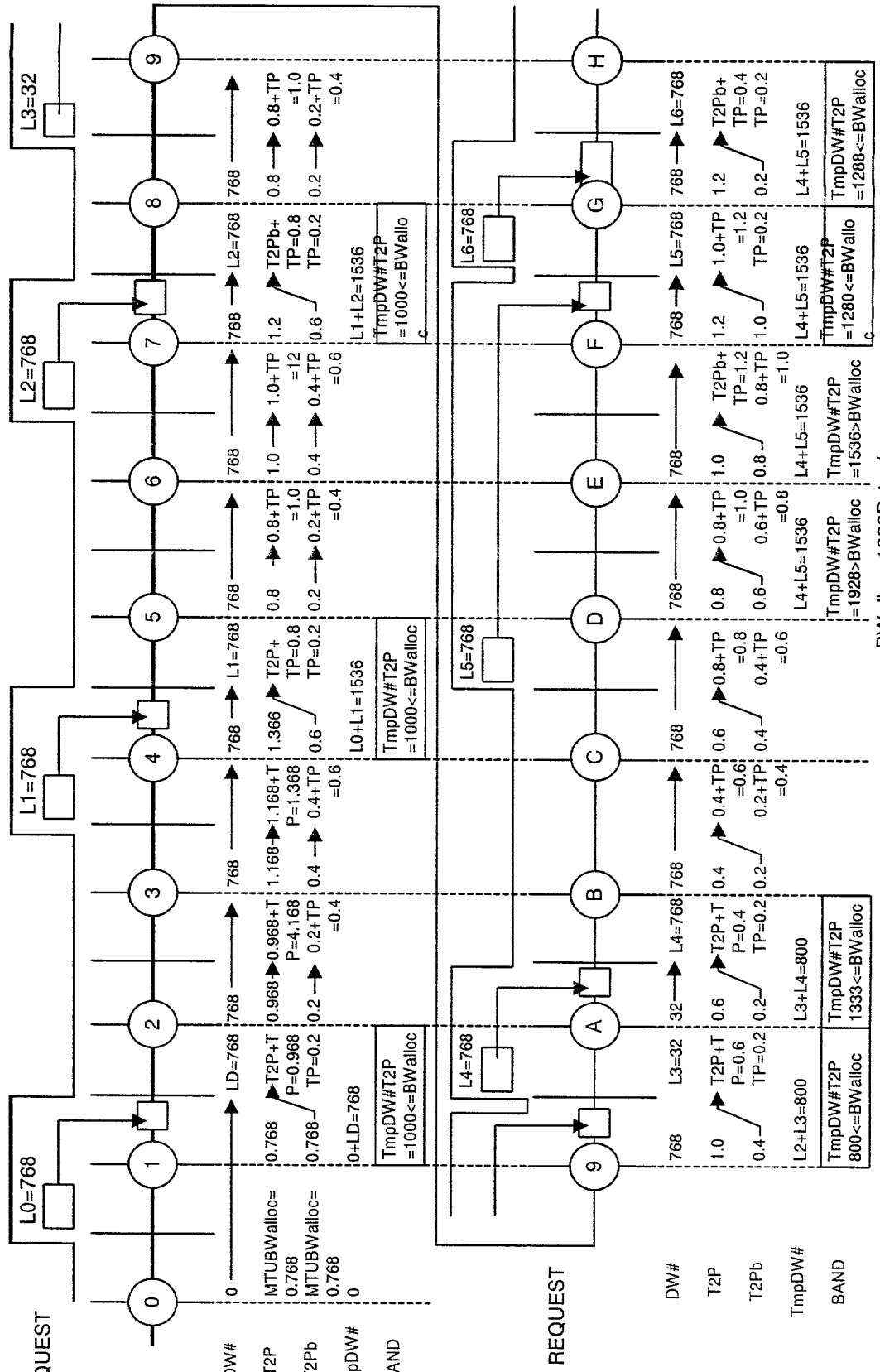
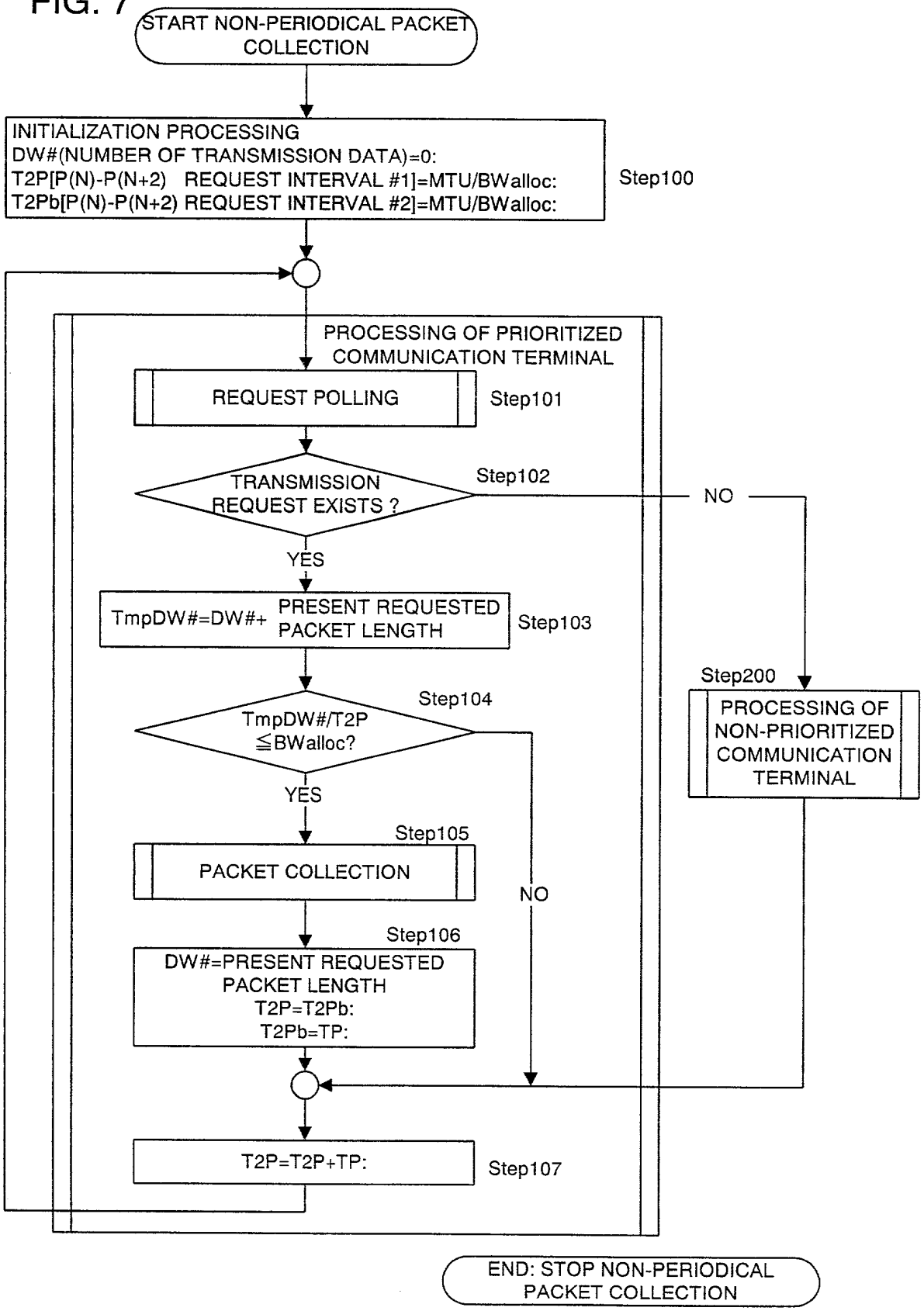

REQUEST
L0=768
L1=768
L2=768
L3=32
DW#
T2P
T2Pb
TmpDW#
BAND
MTUBWalloc=
0.768
LD=768
T2P+T
P=0.968
TP=0.2
0.968+T
P=4.168
0.2+TP
=0.4
1.168+T
P=1.368
0.4+TP
=0.6
T2P+
TP=0.8
TP=0.2
0.8+TP
=1.0
0.2+TP
=0.4
1.0+TP
=1.2
0.4+TP
=0.6
T2Pb+
TP=0.8
TP=0.2
0.8+TP
=1.0
0.2+TP
=0.4
0+LD=768
L0+L1=1536
L1+L2=1536
TmpDW#T2P
=1000<=BWalloc
L2+L3=800
L3+L4=800
L4+L5=1536
L5=768
L6=768
TmpDW#T2P
800<=BWalloc
1333<=BWalloc
=1928>BWalloc
=1536>BWalloc
=1280<=BWalloc
=1288<=BWalloc
BWalloc=1333Bytes/sec

FIG. 7


START NON-PERIODICAL PACKET COLLECTION
INITIALIZATION PROCESSING
DW#(NUMBER OF TRANSMISSION DATA)=0:
T2P[P(N)-P(N+2) REQUEST INTERVAL #1]=MTU/BWalloc:
T2Pb[P(N)-P(N+2) REQUEST INTERVAL #2]=MTU/BWalloc:
Step100
PROCESSING OF PRIORITIZED COMMUNICATION TERMINAL
REQUEST POLLING
Step101
TRANSMISSION REQUEST EXISTS ?
Step102
NO
YES
TmpDW#=DW#+ PRESENT REQUESTED PACKET LENGTH
Step103
Step200
PROCESSING OF NON-PRIORITIZED COMMUNICATION TERMINAL
Step104
TmpDW#/T2P ≦BWalloc?
YES
Step105
PACKET COLLECTION
NO
Step106
DW#=PRESENT REQUESTED PACKET LENGTH
T2P=T2Pb:
T2Pb=TP:
T2P=T2P+TP:
Step107
END: STOP NON-PERIODICAL PACKET COLLECTION